



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,241	04/18/2001	James G. Clements	SP00-124	1367

22928 7590 03/13/2003

CORNING INCORPORATED
SP-TI-3-1
CORNING, NY 14831

EXAMINER

QUAN, ELIZABETH S

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 03/13/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,241

Applicant(s)

CLEMENTS ET AL.

Examiner

Elizabeth Quan

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 13-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-50 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a multi-well plate, classified in class 422, subclass 102.
 - II. Claims 32-35, drawn to a multi-well plate, classified in class 422, subclass 102.
 - III. Claim 36, drawn to a multi-well plate, classified in class 422, subclass 102.
 - IV. Claims 13-31 and 37-50, drawn to a method of making a multi-well plate, classified in class 156, subclass 272.4.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together, as they form separate inventions or multi-well plates with different modes of operation, functions, or different effects. Invention I has an upper plate formed from a polymeric material and lower plate formed from an inorganic material, and Invention II does not specify the material of the upper plate but the lower plate is formed from a polymeric film with a certain range of thickness instead of the inorganic material of Invention I. From these differences, Invention I is mostly likely better for optical analysis, agitation, or heating, and Invention II is mostly likely better for coatings with biological materials. Invention III does not even specify upper and bottom plates or layers as Inventions I and II. Invention III could be a coated petri dish.

Art Unit: 1743

3. Inventions I, II, and III and Invention IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as molding the two layers together via insert injection molding or applying an outer layer to the two layers without curing, cross-linking, or vulcanization to prevent covalent bonding.
4. Because these inventions (I, II, and III versus IV) are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, Group I is not required for Group III, and Group II is not required for Group III, restriction for examination purposes as indicated is proper.
6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
7. During a telephone conversation with Thomas R. Beall on 3/4/2003 a provisional election was made with traverse to prosecute the invention of I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-50 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Referring to claims 1 and 6, the claims recite that the frame and layer are bound without use of adhesive. However, it appears the frame made from a material with silane functionality, such as poly(ethylene-co-trialkoxysilane), acts as an adhesive to bond with the layer. Therefore, the frame is an adhesive. The frame and layer are actually bound with use of an adhesive.

Specification

12. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1, 4-8, 11, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,171,780 to Pham et al.

Referring to claims 1, 4-8, 11, and 12, Pham et al. disclose a multi-well plate for use in assaying samples (see FIGS. 1A and 1B; COL. 10, lines 6-9). The multi-well plate comprises a unitary upper plate or frame (10) that forms sidewalls (14) of at least one sample well and unitary lower plate or layer (11) that forms the bottom walls of the at least one sample well (see FIGS. 1A and 1B; COL. 10, lines 9, 10, and 17-22; COL. 12, lines 45 and 46; COL. 13, lines 47-50). The unitary upper plate or frame (10) is formed from an organic polymeric material, such as polystyrene or cycloolefins (see COL. 10, lines 13-15; COL. 15, lines 34-43, 54, and 55). The unitary lower plate or layer (11) is formed from an inorganic material, such as borosilicate glass or quartz (see COL. 15, lines 32-34, 54, and 55; COL. 38, lines 54-56). A biologically active coating, such as polylysine or fibronectin, may also be attached to the bottom walls of the at least sample well to enhance attachment of cells (see COL. 14, lines 57-67; COL. 15, lines 1 and 2). The unitary upper plate or frame (10) and unitary lower plate or layer (11) are covalently attached and bound without use of an adhesive by sonic or heat welding or melting (see

Art Unit: 1743

COL. 15, lines 49-52). Therefore, Pham et al. includes all the limitations in claims 1, 4-8, 11, and 12.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1743

18. Claims 2, 3, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,171,780 to Pham et al. (Embodiment 1) ~~as applied to the frame of Pham et al.~~ ~~in view of WO 95/16005 to Case et al.~~ in view of WO 95/16005 to Case et al.

Referring to claims 2, 3, 9, and 10, Pham et al. do not disclose that the frame is made from a silane functional polymer, such as poly(ethylene-co-trialkoxysilane). However, Case et al. disclose a composition comprising poly(ethylene-co-trialkoxysilane) providing adhesivity to a broad range of substrates at elevated temperatures (see ABSTRACT; PAGE 1, lines 7-14; PAGE 4, lines 14-24; PAGE 5, lines 29-35; PAGES 6-8). The composition may be applied to one adherend or the frame made from PVC or a thermoplastic polyester or the other adherend or the layer made from wood, glass, or metal and subjected to moisture curing (see PAGE 5, lines 17-25; PAGE 6, lines 14-16; PAGE 10, lines 4 and 5).

In the immediate application it is noted that the frame made from a material with silane functionality, such as poly(ethylene-co-trialkoxysilane), is an adhesive that binds with the layer. Additionally, since the composition of Case et al. is applied to the frame, the composition is part of the frame and provides adhesivity to it in order to bind with the layer. The subsequent process of curing provides covalent bonding between the frame and layer.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the frame of Pham et al. to make it from a silane functional polymer, such as poly(ethylene-co-trialkoxysilane), as in Case et al. to provide adhesivity to a broad range of substrates at elevated temperatures.

Art Unit: 1743

19. Alternatively, claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,171,780 to Pham et al. (Embodiment 1) as applied to claims 1, 4, 6-8, and 11 above, and further in view of U.S. Patent No. 6,171,780 to Pham et al. (Embodiment 2).

Referring to claims 5 and 11, it is unclear whether Pham et al. is teaching the layer made from borosilicate glass in Embodiment 1, as previously referred to. However, Example 5 of Pham et al. teach the layer made from borosilicate glass to create a high-density multi-well platform for improved optical analysis. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the layer of Pham et al. (Embodiment 1) to make it from borosilicate glass as in Pham et al. (Embodiment 2) to create a high-density multi-well platform for improved optical analysis.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They include one or more limitations in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (703) 305-1947. The examiner can normally be reached on M-F (8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1743

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elizabeth Quan
Examiner
Art Unit 1743

eq
March 9, 2003


Bill Warden
Supervisory Patent Examiner
Technology Center 1700

Application/Control Number: 09/837,241

Art Unit: 1743

Page 10